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No. IV.

SELF-ACTING VICE.

The SILVER ISIS MEDAL was presented to Mr. H. DE JAY DE BEAUFORT, Perigeaux, France, for his Self-acting Carpenter's Vice ; a Model of which has been placed in the Society's Repository.

26 Bury Street, St. James's.

SIR,

24th Nov. 1840.

I BEG to submit to the Society of Arts an invention which I think attains two objects, to which the attention of candidates is directed, viz. " 3. To improvements in the tools used in the various handicraft trades;" " 4. To the diminution of labour required to perform mechanical operations, either by improving the apparatus employed, or the mode of using it." It is a self-acting vice, which enables the workman to fix boards of various sizes, so that he may plane them edgewise, without having recourse to a bench-hook or vice. Its advantage over the bench-hook is, that it gives the board a steady position, which the operation of planing can but increase, as the forward thrust wedges the board more tightly into the machine. The advantage over the vice is its self-action and the superiority of the workmanship, the board being supported in all its length, instead of one point only at each end, as in the case of the screw; which latter mode of fixing has the disadvantage of allowing the board to give way in the centre, when it is of a certain length. The facility with which it is made (a few minutes only being

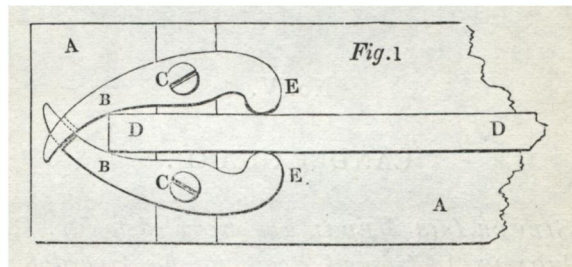
sufficient) renders it at all times available. Its application is not limited to boards ; it will expedite infinitely the making of cylindrical pieces, rods, &c. &c. I name it a Jay, being anxious that my name should be, for the working class, synonymous with diminution of labour.

Yours, &c. &c.

DE JAY.

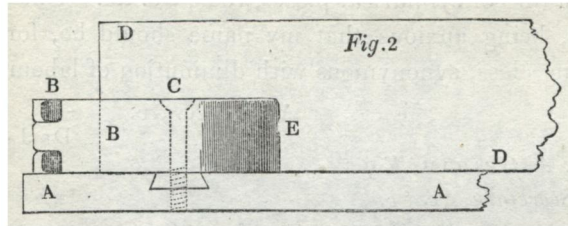
W. A. GRAHAM, Esq.
Secretary, &c. &c.

The object of this contrivance is to give stability to a board during the operation of planing its edges ; the simple act of thrusting the board into the jaws of the machine, fixing it fast without further adjustment. The vice is mounted on a planing-board (A A, figs. 1 and 2),



of suitable dimensions, which is to be placed on the bench and stopped by the bench-hook. It consists of a pair of jaws B B, made of beech or other hard wood, turning on upright iron pivots or screws C C. When the board D D, of which the edge is to be planed, is driven into the jaws, it acts as a wedge, and the force tending to separate them is transmitted backwards by leverage to the tails E E, which are pressed against the sides of the board, and hold it firmly locked.

At the angular junction of the ends *BB*, they are partly crossed, a tooth on the one fitting into an opening



in the other. By this arrangement, these ends are not completely separated, even when the tails *EE* are placed in contact; and thus, if the board be ever so thin, it will find an abutment.

No. V.

CANDLE-GUARD.

The SILVER ISIS MEDAL was presented to Mr. DAVID THOMAS, 18 Goswell Road, for his Guard for preventing the Guttering of Candles; a Model of which has been placed in the Society's Repository.

MR. THOMAS having experienced the loss and inconvenience occasioned by the guttering of tallow-candles when used in work-shops, where they are subject to the action of strong currents of air, conceived that the use of the apparatus here described would prove an effectual remedy for the evil.